CLAIMS

What is claimed is:

1. A method for detecting concealed items on or in an object, comprising:

producing a pencil beam of x-rays from an x-ray source directed toward said object;

scanning said beam of x-rays over the surface of said object; and

detecting x-rays scattered from said beam of x-rays as a result of interacting with said object and a low Z material panel, said object located between said detector and said panel.

2. The method of claim 1 further comprising generating a signal representative of the intensity of the x-rays scattered.

3. The method of claim 2 further comprising presenting said signal on a display.

4. The method of claim 1 wherein said low Z material panel is made polyethylene.

5. The method of claim 1 wherein said low Z material panel is made of epoxy.

6. The method of claim 1 wherein said low Z material panel is made of water.

7. The method of claim 1 further comprising a radiation shield coupled to said low Z material panel, said low Z material panel located between said object and said radiation shield.

8. The method of claim 7 wherein said radiation shield comprises an x-ray absorbing material.

9. The method of claim 8 wherein said x-ray absorbing material is steel.

10. The method of claim 8 wherein said x-ray absorbing material is lead.

11. The method of claim 7 wherein said radiation shield is about 1mm thick.

12. The method of claim 1 wherein said low Z material panel is located above said object.

13. The method of claim 1 wherein said low Z material panel is located below said object.

14. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for detecting concealed items on or in an object, said method comprising:

producing a pencil beam of x-rays from an x-ray source directed toward said object;

scanning said beam of x-rays over the surface of said object; and

detecting x-rays scattered from said beam of x-rays as a result of interacting with said object and a low Z material panel, said object located between said detector and said panel.

15. An apparatus to detect concealed items on or in an object, comprising:

an x-ray source to produce a pencil beam of x-rays directed toward said object;

a scanner to scan said beam of x-rays over the surface of said object; and

a detector to detect x-rays scattered from said beam of x-rays as a result of interacting with said object and a low Z material panel, said object located between said detector and said panel.

16. The apparatus of claim 15 further comprising a processor to generate a signal representative of the intensity of the x-rays scattered.

17. The apparatus of claim 16 further comprising a display to display said signal.

18. The apparatus of claim 15 wherein said low Z material panel is made polyethylene.

19. The apparatus of claim 15 wherein said low Z material panel is made of epoxy.

20. The apparatus of claim 15 wherein said low Z material panel is made of water.

21. The apparatus of claim 15 further comprising a radiation shield coupled to said low Z material panel, said low Z material panel located between said object and said radiation shield.

22. The apparatus of claim 21 wherein said radiation shield comprises an x-ray absorbing material.

23. The apparatus of claim 22 wherein said x-ray absorbing material is steel.

24. The apparatus of claim 22 wherein said x-ray absorbing material is lead.

25. The apparatus of claim 21 wherein said radiation shield is about 1mm thick.

26. The apparatus of claim 15 wherein said low Z material panel is located above said object.

27. The apparatus of claim 15 wherein said low Z material panel is located below said object.